

Pollination Station #2: Deluxe Log

an amplified habitat sculpture for solitary bees and wasps*

Sarah Peebles

(Rob Cruickshank, electronics; John Kuisma, log fabrication)

Many species of solitary native bees (and wasps) throughout the world nest in vacated beetle bores and other pre-formed cavities, and are critical pollinators. 'Deluxe Log' is a free-standing modified log which provides habitat and which incorporates a weather-resistant observation panel, vibrational sensors (acting as microphones), custom-built circuitry, headphones and magnifying lens which, combined, provide a magnified, immersive environment in which to observe these pollinators in all stages of their life cycles.

Deluxe Log draws from three design models: standardized nest blocks developed by the alfalfa pollination industry (Saskatchewan) for the managed leafcutter bee *Megachile rotundata*; mason bee 'houses' (genus *Osmia*) popular for orchard pollination; and, modified nest blocks which accommodate both internal viewing and many different species of solitary bees and wasps, developed by Peter Hallett (Toronto).

'Deluxe Log' retains the visual flow of its natural structure, can be easily placed in a garden, field, rooftop, forest, etc., and provides unobtrusive viewing and listening access to nesting activities of a wide variety of local wild solitary bees and wasps normally inaccessible yet omnipresent in most urban and rural environments. In addition to providing a (literal) window on the range of nesting materials, methods and strategies, food sources, physiological details and lifecycle timings (phenologies) of various types of solitary pollinators - and the cleptoparasites which prey upon them (a/k/a cuckoo bees and cuckoo wasps) - 'Log' also facilitates observation of other aspects of pollination ecology which unfold over longer time periods: population growth and competition among and between the species which choose to inhabit 'Log', interactions with/effects of cleptoparasites and other invasive organisms (also naturally present in the environment), and the wider implications of surrounding habitat, weather patterns and human presence.

'Delux Log' is one of several 'pollination station' habitat sculptures developed as part of 'Resonating Bodies'. It cross-references with RB's 'Bee Trading Cards' (also on display), 'A Guide to Toronto's Pollinators' (David Suzuki Foundation) and the Resonating Bodies web site/blog (resonatingbodies.wordpress.com). Resonating Bodies is a series of integrated media installations, community outreach projects and educational initiatives focusing on biodiversity of pollinators indigenous to the natural and urban ecosystems of Toronto, Canada.

*Solitary insects nest and collect food one by one; unlike social insects - honey bees, bumble bees, paper wasps, for example - solitaries do not make honey or wax, do not defend their nests (from mammals), and do not sting unless trapped or handled. There are over 800 species of bees native to Canada, some 5,000 species in North America and more than 20,000 species worldwide. European honey bees (*Apis mellifera*), a managed species, were initially introduced to North America and most other parts of the world from Europe. Bees are descended from wasps (and thus solitary species retain similar nesting sites and nest construction methods; wasps can pollinate as well, though to a much lesser extent than bees).

Biographies

Sarah Peebles (Toronto) is a composer, improviser, audio artist and installation artist. Much of her work explores the natural world, and, found sound manipulated via computer and physical objects. Recent collaborations with biologists, designers and other artists, 'Resonating Bodies', focus on pollination ecology. See sarahpeebles.net <http://resonatingbodies.wordpress.com/> for details. **Robert Cruickshank** (Toronto) is a multidisciplinary artist. His work in various media, including kinetic art, electronic and robotic installations, sound art, electroacoustic music and photography, has been exhibited in Toronto and internationally. He has also developed a number of electronics-oriented workshops at InterAccess Electronic Media Art Centre (more at robcruckshank.net). **John Kuisma** (Toronto) creates audio, electronics, sculpture, installation and custom fabrication (more at <http://kuisma.ca/>).

RESONATING BODIES

Images, video, audio, and text bring together arts, pollination ecology, science and community on the web and beyond. <http://resonatingbodies.wordpress.com>